

# Canada's Adaptation Platform: innovative collaboration to support national and regional adaptation action

The Sixth Annual Southeast Florida Climate Leadership Summit,  
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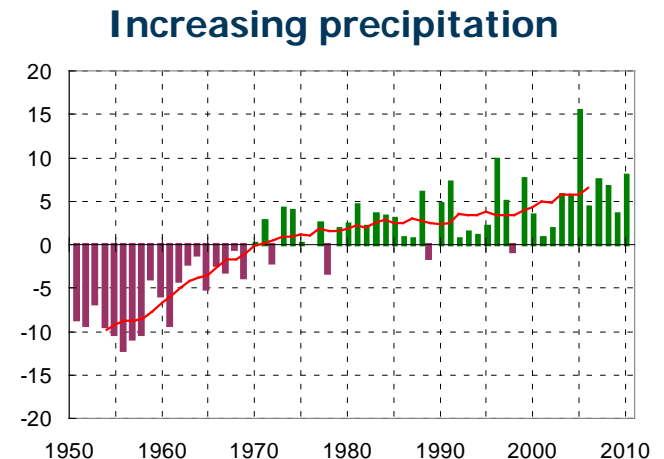
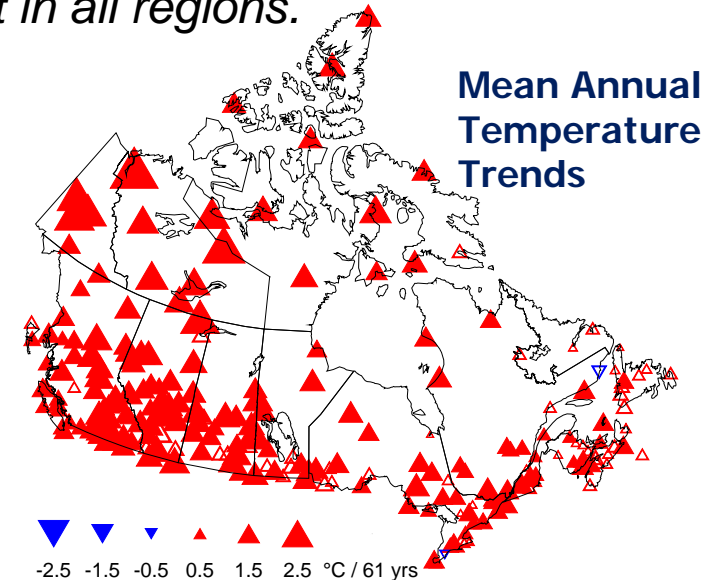
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Canada

# Canada's Climate is Changing

*Canada's climate is changing, with impacts evident in all regions.*

- **Canada has become warmer**
  - 1.5°C between 1950 and 2010
  - Annual number of extreme warm days has increased, while extreme cold days have declined
- **The cryosphere is responding**
  - Dramatic decline in sea ice
  - Less snowfall and snow cover
  - Glaciers are shrinking
- **Canada has become wetter**
  - Much regional variation



# Adaptation: Reducing risks



coastal erosion



forests



flooding



Energy



sea level rise

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**Great Lakes low water levels could cost \$19B by 2050**  
 Unclear if water level rebound since 2013 is start of a trend, new report by Mowat Centre says  
 The Canadian Press Posted: Jun 26, 2014 10:49 AM ET | Last Updated: Jun 26, 2014 3:59 PM ET

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A new study by the Mowat Centre says it could cost Canada and the U.S. more than \$19 billion by 2050 if water levels in the

transportation systems





# Adaptation: Seizing opportunities

forests - agriculture

hydro-potential

Power Plants Around the World



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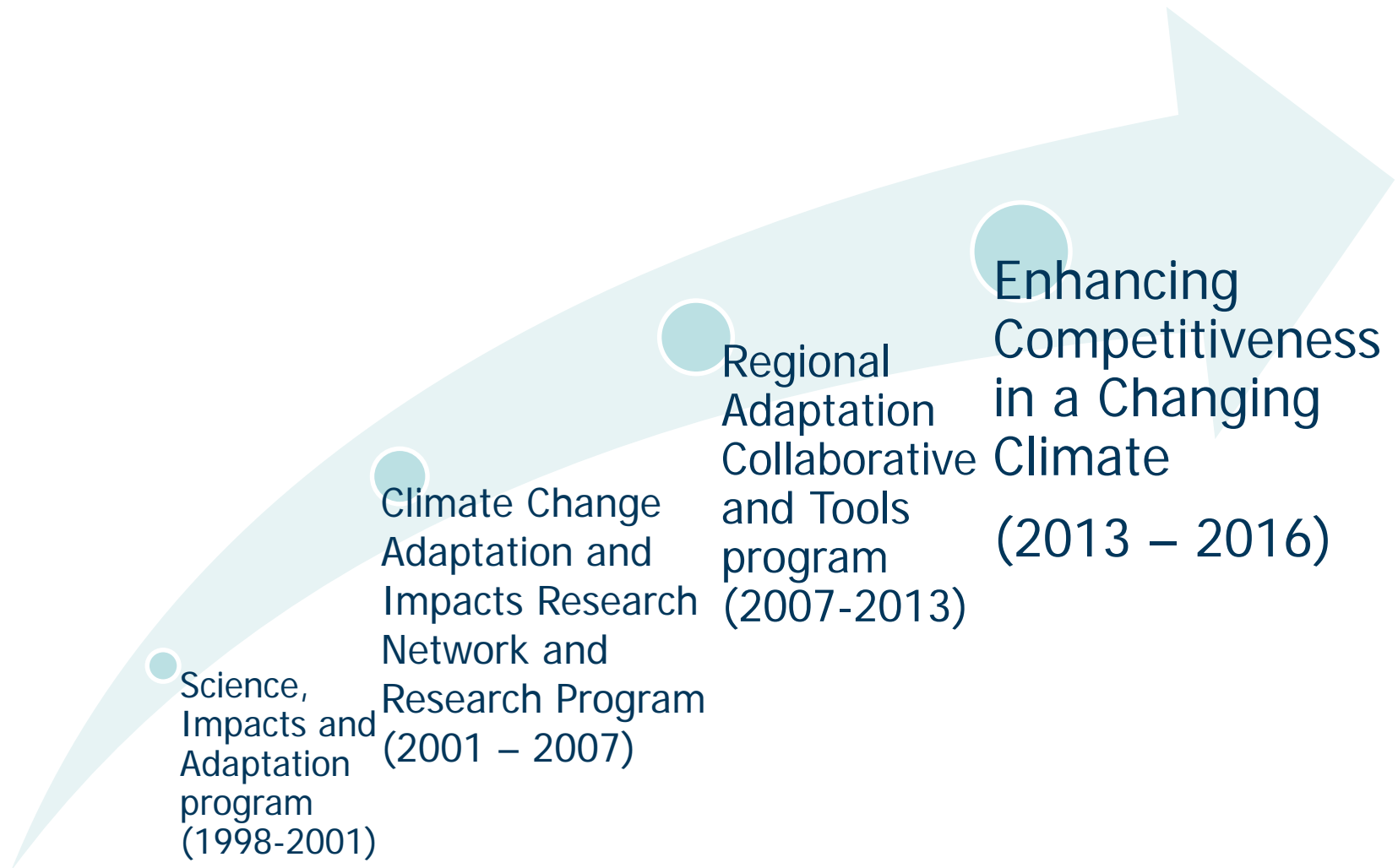
Barbie Leans In Just a Little Bit

Sponsored Video

May 8 (Bloomberg) -- The Arctic Circle Co-Founder Alice Rogoff discusses climate change and Arctic shipping routes with Mark Crumpton on Bloomberg Television's "Bottom Line." (Source: Bloomberg)



# Evolution of adaptation programming



# Current Canadian policy context:

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- Federal role defined in the 2010 *Federal Adaptation Policy Framework – helping Canadians adapt by*:
  1. Generating and sharing knowledge needed for decision-making
  2. Building capacity to help partners use that knowledge to adapt
  3. Integrating adaptation into federal decision-making
  
- Current program: \$148.8 million from 2011 to 2016 across eleven federal departments
  - \$35M to Natural Resources Canada (NRCan) Programming: *Enhancing Competitiveness in a Changing Climate*
  
- Recognize key role of regional organizations and communities in translating adaptation knowledge into action

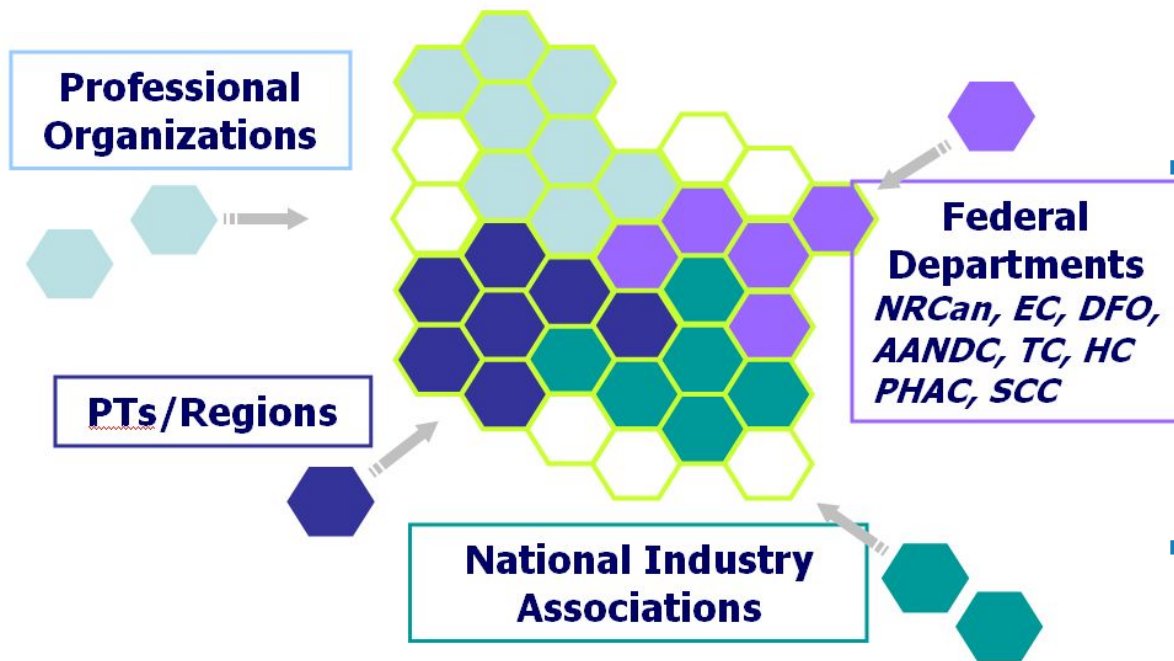


# Why is intergovernmental/interagency cooperation required?

- Climate change impacts cut across geographic and sectoral boundaries - addressing risks requires cooperation across regions, disciplines and organizations
- Decisions driven by local or industry needs are affected by policies, programs, regulations and legislation from all levels of government
- Solutions require the involvement of a variety of interests to ensure technical, economic and environmental soundness and sustainability
- Requires collaborative “investment” of time and resources, but yields dividends over time
  - efficient use of resources
  - sharing of data, expertise, experience
  - building new understanding and synergies



# The Adaptation Platform: enhancing collaboration



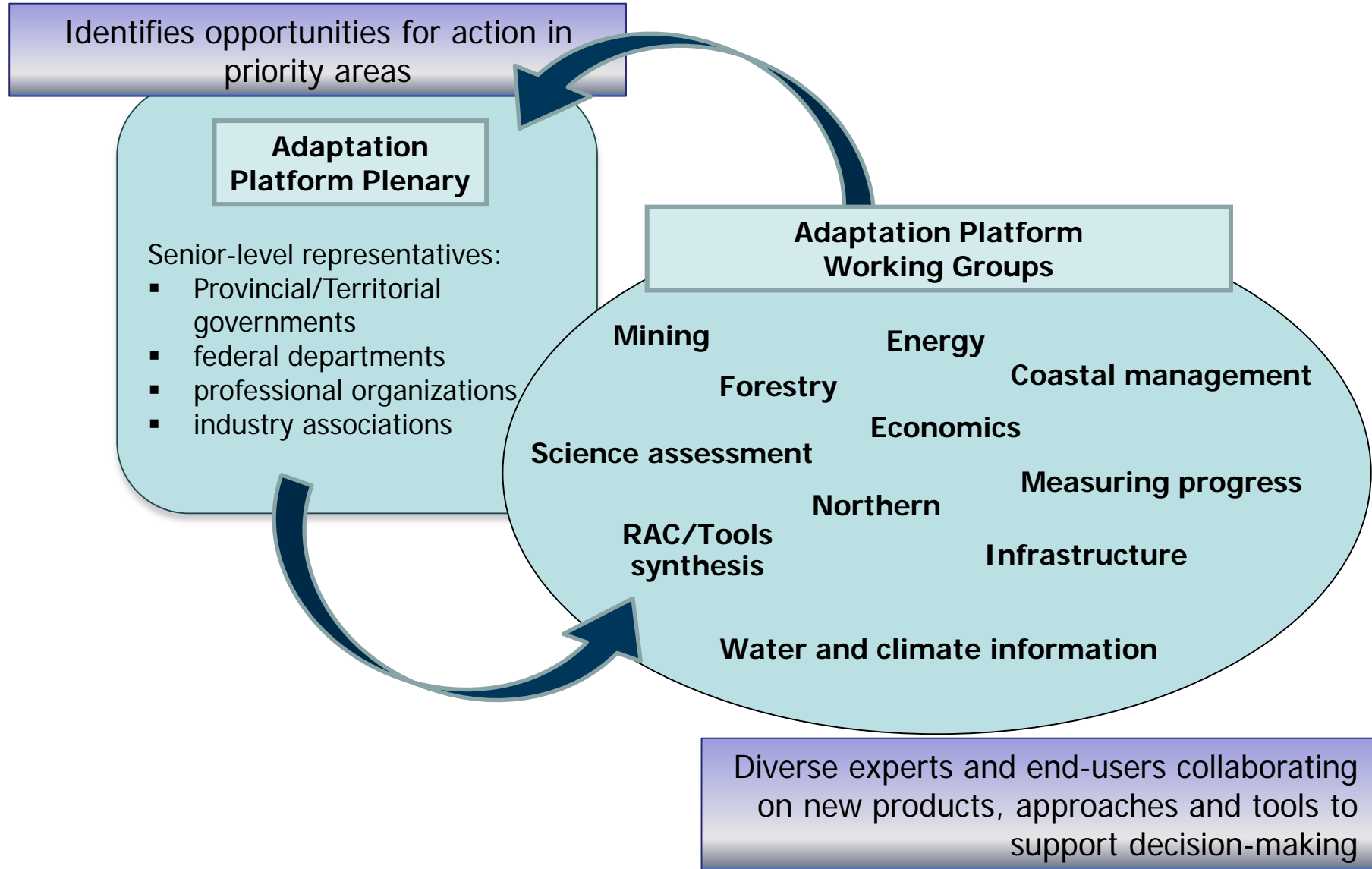
Key role for governments: **convenors**

- Mechanism to bring together knowledge, capacity & resources
- Focus on generating specific, decision-useful information and tools that regions and key industries need to understand and adapt to a changing climate
- Expanding the tent
  - + industry, financial sectors
  - + federal departments
- Each participating organization brings its own resources, priorities and mandate





# How does the Adaptation Platform work?



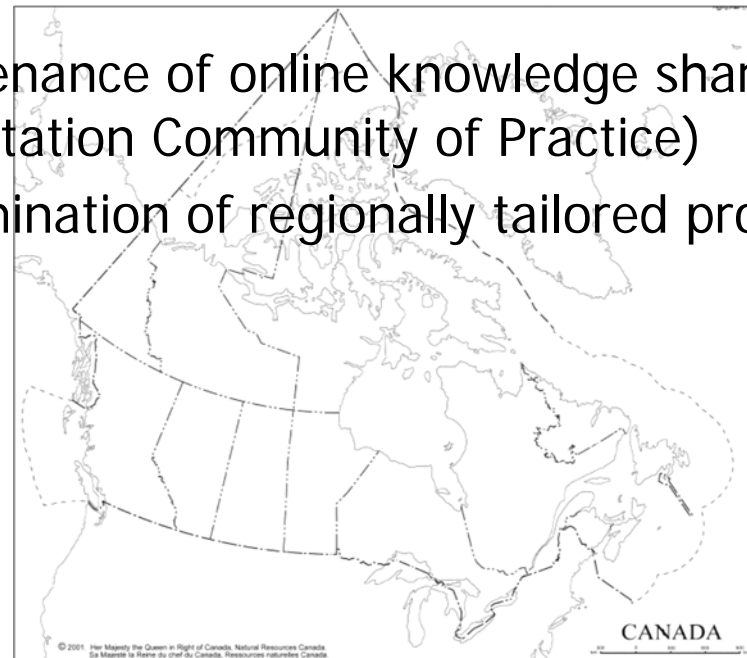
# Facilitating Regional Action: Regional Adaptation Collaboratives (RACs)

- 5 regional knowledge hubs created to enable regions to tackle self-identified adaptation priorities
- Dual role:
  - disseminating regional adaptation knowledge
  - Refining information and tools for regional users
- Strong connection between RACs and the Adaptation Platform ensure that pockets of adaptation knowledge and innovative practices are transferred across Canada and reach local users



# RAC activities

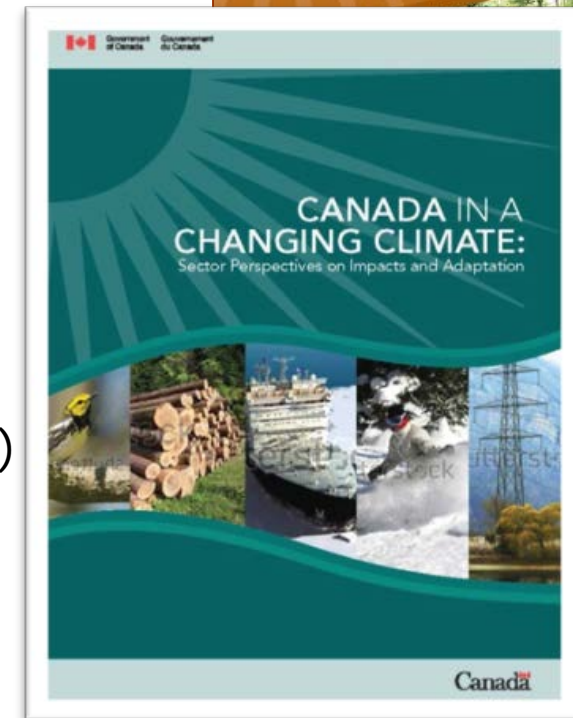
- Engage key players in regionally significant sectors to:
  - Raise awareness and build capacity
  - Disseminate relevant information and knowledge
  - Advance adaptation through facilitated learning, policy analysis, sharing lessons learned and best practices
- Activities include:
  - Development and maintenance of online knowledge sharing tools (ie Climate Change Adaptation Community of Practice)
  - Development and dissemination of regionally tailored products
  - Workshops
  - Participation in events



# Assessment activities

Generate clear, concise, evidence-based and decision-relevant information

- *From Impacts to Adaptation: Canada in a Changing Climate* (2008): Canadian benchmark informing program and policy directions in governments and industry
- Current initiatives
  - Benchmark report update with focus on sectors (2014)
  - Coast Assessment
  - Transportation (co-led with Transport Canada)
  - Mining (led by Mining Working Group)





# Examples of projects

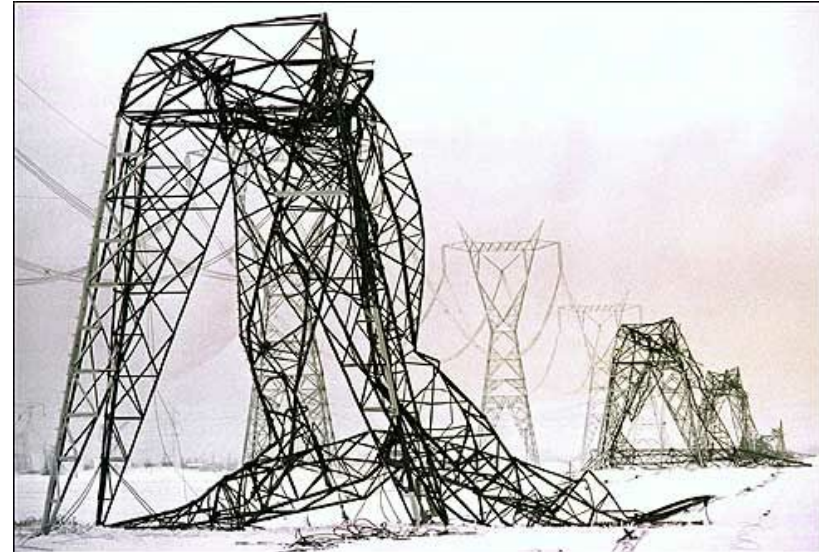
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- Rethinking our waterways: A Guide To Water And Watershed Planning - *Fraser Basin Council*
- Interim Flood Construction Levels: development of interim flood construction levels - *City of Vancouver*
- Insurance Issues in Atlantic Canada - *Institute for Catastrophic Loss*
- Applications of PIEVC: Vulnerability of Coquihalla Highway - *BC Ministry of Transportation*
- Using ADAPTool to Assess What Makes Policies Adaptable under Climate Change – *Adaptive Resource Management*
- Preparing for Climate Change: An Implementation Guide for Local Governments in British Columbia - *BC Ministry of Community, Sport and Cultural Development*
- Delta-RAC Sea Level Rise Adaptation Visioning Studies – *Municipality of Delta*



## Examples of projects (2)

- Energy: Assessment of the vulnerability to climate change of Toronto Hydro's **electrical distribution system** that represents \$2.8B in assets and serves approximately 700,000 customers, including some of Canada's most significant industrial and commercial electricity users.
- Forestry research integrating climate change impacts to predict timber supply risks and opportunities. It is now possible to produce national maps projecting vulnerable forests, communities. Will soon be able to extend this estimating potential changes in GDP and job losses.



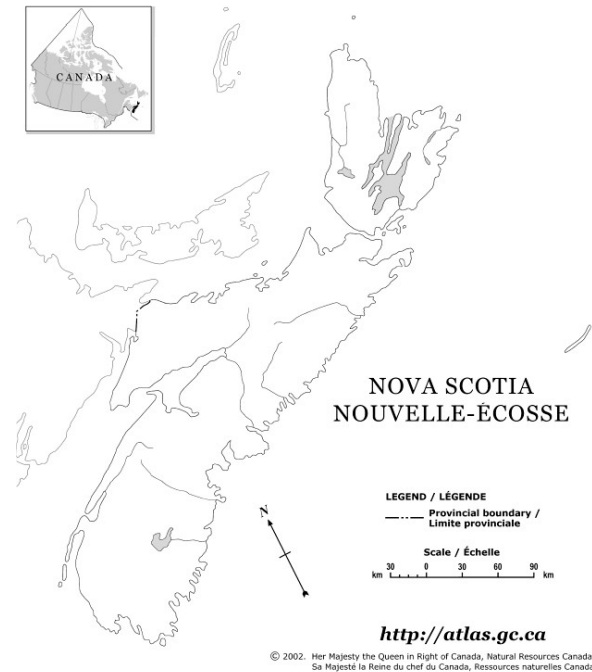
Vulnerability of forest industry to projected fire, drought and spruce budworm risk



Preliminary results

# Examples of projects (3)

- Coastal: Mapping future storm surge flooding to inform development limits that enhance climate resilience of the **rail/road trade corridor** linking Nova Scotia and New Brunswick that annually moves \$43B worth of trade goods.
- Coastal: **Sea dike guidelines** addressing sea level rise in British Columbia and providing cost estimates to implement the guidelines (approximately \$9B protecting \$33.5B in assets in Vancouver alone). The City of Vancouver has formally adopted the 1-metre rise guideline.



# Dissemination is key

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  - Climate Change Publications
    - Impacts and Adaptation Publications
      - Adaptation Case Studies

**Adaptation Guides**

Climate change adaptation guides developed with the support of the Climate Change Impacts and Adaptation Division (CCIAD), Natural Resources Canada. The guides are presented in the language of the author, and do not constitute an endorsement of content or recommendations.

You may also find adaptation [reports](#), [case studies](#), [tools](#) and [posters](#) of interest.

**Adaptation Guidelines: B.C. Sea Dikes and Coastal Flood Hazard Land Use**

<http://www.adaptation.nrcan.gc.ca>

BC Ministry of Environment  
Climate Change Adaptation Guidelines for Sea Dikes and Coastal Flood Hazard Land Use  
Sea Dike Guidelines  
© 2011

(2011) ([PDF](#), 4.15 MB, 59 pages)

This document provides guidelines for the design of sea dikes to protect low lying lands that are exposed to coastal flood hazards arising from their exposure to the sea, and to expected sea level rise due to climate change. It is written for diking authorities and design professionals. Please also note the







Developing **knowledge** and **tools** to reduce risks and maximize opportunities arising from climate change.

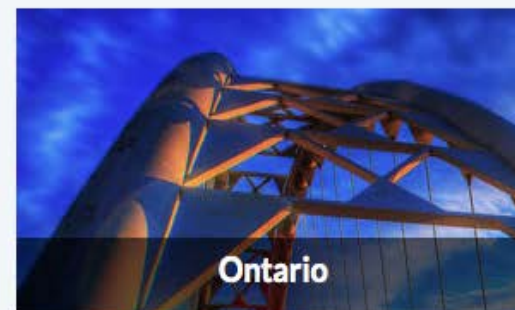
[Get Started](#)

Find community-related adaptation tools and resources developed through Natural Resources Canada's Regional Adaptation Collaborative and Tools for Adaptation Programs.

# Search by Region

## Select a Region

Choose a geographic region to narrow down the list of products available. This filter can be skipped or removed later.



# International cooperation

- Active participation in international fora: UNFCCC, IPCC, OECD, UNISDR (Hyogo), other?
- Looking to increase Canada-US collaboration
  - Federal – federal
  - Region – region
  - Municipal
  - Cross-border issues
- Areas of interest: energy, infrastructure, coastal zone management, flood management



# Thank-you

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